DECLARATION OF INTENT
BETWEEN THE CO-OPERATING AGENCIES
OF THE INTERNATIONAL COSPAS-SARSAT PROGRAMME AND THE
MARITIME SAFETY ADMINISTRATION OF THE PEOPLE'S REPUBLIC OF CHINA
FOR CO-OPERATION ON THE COSPAS-SARSAT MEDIUM-ALTITUDE EARTH ORBIT SEARCH AND RESCUE (MEOSAR) SATELLITE SYSTEM

The Co-operating Agencies of the International COSPAS-SARSAT Programme and the Maritime Safety Administration of the People's Republic of China, hereinafter referred to as the Signatories:

NOTING the successful implementation of the COSPAS-SARSAT search-and-rescue Satellite System currently operated under the terms of the International COSPAS-SARSAT Programme Agreement, done at Paris on 1 July 1988;

NOTING the continued operation of the COSPAS-SARSAT System and its significant international contribution to the saving of human lives for more than forty years through the use of search-and-rescue instruments on satellites in low-altitude Earth orbit (LEOSAR) and geostationary Earth orbit (GEOSAR);

NOTING the commitment of the COSPAS-SARSAT Parties to the Agreement to assure the long-term operation of the COSPAS-SARSAT System and access to this System to all States on a non-discriminatory basis, and free of charge to the end-user in distress;

RECOGNIZING that parallel efforts are being undertaken by the COSPAS-SARSAT Parties, the European Union, and the People's Republic of China in the investigation of enhancing global satellite-aided search and rescue by placing 406-MHz transponders on the satellites of Global Navigation Satellite Systems (GNSS) in medium-altitude Earth orbit, known as BDS, GALILEO, GLONASS and GPS;

NOTING the COSPAS-SARSAT Council decisions, reflected in document C/S R.012, "COSPAS-SARSAT 406 MHz MEOSAR Implementation Plan", to ensure that new MEOSAR satellite constellations would be compatible with the existing COSPAS-SARSAT System, and to the greatest extent possible, interoperable at the user level；

RECOGNIZING that it is desirable for the Russian Federation, the United States of America, the European Union and the People's Republic of China to coordinate planning and development of their MEOSAR satellite constellations (including GNSS elements related to COSPAS-SARSAT System) to ensure that their satellite constellations will be compatible with the existing COSPAS-SARSAT System, and to the greatest extent possible, interoperable at the user level;

NOTING the COSPAS-SARSAT Parties' desire to co-operate at relevant COSPAS-SARSAT fora on matters related to the use by global search-and-rescue services of the distress-location services developed using the BDS, GALILEO, GLONASS and GPS platforms;

NOTING that the People's Republic of China, through the implementation of a SAR/BDS programme (search-and-rescue distress alerting using its BDS spacecraft and compatible ground segment), aims to become one of the providers of space and ground segments of the COSPAS-SARSAT MEOSAR system;

NOTING FURTHER the decisions made by the Council at its Fifty-Ninth Session in February 2018 to include the SAR/BDS payloads, intended to be provided by the People's Republic of China, into the document C/S R.012, "COSPAS-SARSAT 406 MHz MEOSAR Implementation Plan", and the intention to formally recognize the above noted contribution of the People's Republic of China into the MEOSAR space segment of the Cospas-Sarsat System;

DECLARE their intent as follows:

1. Definitions

- "**Agreement**" means the International COSPAS-SARSAT Programme Agreement, done at Paris on 1 July 1988.

- **"BDS"** means the medium-altitude Earth-orbit global navigation satellite system being developed and implemented by the People's Republic of China.

- **"Compatibility"** means that the MEOSAR components are capable of orderly and efficient integration and operation with the COSPAS-SARSAT System, and that they are able to coexist on a non-interfering basis with each other and with the existing COSPAS-SARSAT System.

- **"Co-operating Agencies"** means the agencies designated by the four COSPAS-SARSAT Parties for the purpose of implementing the Programme.

- **"COSPAS-SARSAT Parties"** means the Parties to the Agreement (i.e., Canada, the Republic of France, the Russian Federation and the United States of America).

- **"COSPAS-SARSAT System"** means the satellite-aided search-and-rescue (SAR) system comprising:

  a) the low-altitude Earth-orbiting satellites of the LEOSAR space segment described in Article 3 of the Agreement;

  b) the medium-altitude Earth-orbiting satellites of the MEOSAR space segment, as decided by the Council pursuant to Article 3.2 of the Agreement;

  c) the geostationary Earth-orbiting satellites of the GEOSAR space segment, as decided by the Council pursuant to Article 3.2 of the Agreement;

  d) the ground segment established by the COSPAS-SARSAT Parties or by Ground Segment Providers under the terms of the Agreement, including Local User Terminals operating with the LEOSAR, MEOSAR and GEOSAR satellites and Mission Control Centres (MCCs); and

  e) radiobeacons operating at 406-MHz frequencies as described at Article 3 of the Agreement, including the radiobeacons authorized by User States under the terms of the Agreement, or by other States that avail themselves of the System.

- **"Council"** means the COSPAS-SARSAT Council established pursuant to the Agreement.

- **"Declaration"** means the present Declaration of Intent between the Co-operating Agencies of the International COSPAS-SARSAT Programme and the Maritime Safety Administration of the People's Republic of China for Co-operation on the Medium-altitude Earth Orbit Search and Rescue (MEOSAR) satellite system.

- **"GALILEO"** means the medium-altitude Earth-orbit global navigation satellite system established under the Galileo Programme being developed and implemented by the European Union.

- **"Global Positioning System (GPS)"** means the medium-altitude Earth orbit global navigation satellite system operated and maintained by the United States of America.

- **"GLONASS"** means the medium-altitude Earth orbit global navigation satellite system operated and maintained by the Russian Federation.

- **"Interoperability"** means that the components of the MEOSAR system conform to a common architecture and comply with mutually decided upon performance standards, and that similar satellite downlink characteristics allow ground stations to track satellites and process signals from all MEOSAR satellite constellations.

- **"MEOSAR component provider"** means each of the COSPAS-SARSAT Parties and other COSPAS-SARSAT space segment providers that contribute to the MEOSAR space segment in accordance with the relevant COSPAS-SARSAT documents signed under authorization of the COSPAS-SARSAT Parties.

- **"MEOSAR system"** means the 406-MHz SAR instruments on BDS, GALILEO, GLONASS, and GPS medium-altitude Earth orbit navigation satellite systems, and the ground segment for receiving, processing and distributing data from 406-MHz radiobeacon transmissions.

- **"MEOSAR Early Operational Capability (EOC) phase"** means the MEOSAR operational phase prior to Initial Operational Capability (IOC), declared by the Council to commence at 13:00 UTC on 13 December 2016, with the following characteristics and capabilities:

  - the successful commissioning of all nodal MCCs, or their backup MCCs, to manage MEOSAR data, and successful commissioning of at least one Local User Terminal of the MEOSAR system (MEOLUT) associated with a commissioned MCC;

  - the capability to distribute operational MEOSAR data among commissioned LEOSAR/GEOSAR/MEOSAR (LGM) capable MCCs;

  - approval by the Council of either the MEOSAR Demonstration and Evaluation Phase I and II test reports, or recommendations from the COSPAS-SARSAT Joint Committee, that

validate initial MEOSAR performance such that the COSPAS-SARSAT System could allow the operational use of the MEOSAR data;

- the notification sent by the Council to the International Civil Aviation Organization (ICAO), the International Maritime Organization (IMO) and national Administrations of the beginning of EOC; and

- the availability of commissioned LGM MCCs having the capability to transmit, and all MCCs (both LEOSAR/GEOSAR and LGM) having the capability to receive, MEOSAR alert data in accordance with document C/S A.001, "COSPAS-SARSAT Data Distribution Plan".

- **"MEOSAR Initial Operational Capability (IOC) phase"** means the MEOSAR operational phase prior to Full Operational Capability (FOC), declared by the Council, with the following characteristics and capabilities:

  - SAR transponders installed aboard medium-altitude Earth orbit (MEO) satellites, relaying 406-MHz radiobeacon signals to MEOLUTs, when such facilities have been formally commissioned into the COSPAS-SARSAT System;

  - MEOLUTs generate beacon detection and localisation data to provide to the COSPAS-SARSAT network of MCCs for use operationally by those MCCs to support SAR operations;

  - the MEOSAR IOC coverage may not be global and therefore the COSPAS-SARSAT System relies on the complementarity among the LEOSAR, GEOSAR and MEOSAR system components.

- **"MEOSAR Full Operational Capability (FOC) phase"** means the operational phase of the MEOSAR system, declared by Council, with the following characteristics and capabilities:

  - SAR transponders installed aboard MEO satellites, relaying 406-MHz radiobeacon signals to MEOLUTs, when such facilities have been formally commissioned into the COSPAS-SARSAT System;

  - MEOLUTs generate beacon detection and localisation data to provide to the COSPAS-SARSAT network of MCCs, commissioned for MEOSAR, for use operationally by those MCCs to support SAR operations;

  - the MEOSAR FOC coverage is global and therefore the COSPAS-SARSAT System can rely entirely on the MEOSAR system for the provision of COSPAS-SARSAT services.

- **"Programme"** means those activities carried out by the COSPAS-SARSAT Parties under the terms of the Agreement, to provide, operate and coordinate the COSPAS-SARSAT System in accordance with the Agreement.

2. Objective and Scope of the Declaration

2.1 The Signatories intend to co-operate in the EOC, IOC and FOC phases of the MEOSAR system in order to make available on an operational basis the detection and localization data from commissioned MEOSAR system facilities and ultimately deploy a fully operational MEOSAR system.

2.2 The scope of this Declaration covers all the EOC, IOC and FOC phases of the MEOSAR system implementation and operation.

3. Principles of Co-operation

3.1 Nothing in this Declaration is intended to imply any required exchange of resources or technology among the Signatories for the implementation of their co-operation under the present Declaration.

3.2 The Signatories expect each MEOSAR component provider to fund the development and operation of its respective contribution, which may include components for relaying, receiving and processing the 406 MHz radiobeacon transmissions.

3.3 The Signatories understand that there will be no exchange of funds under this Declaration.

3.4 The Signatories intend to carry out the co-ordination and actions necessary to achieve compatibility with the existing COSPAS-SARSAT System and interoperability between MEOSAR components as outlined in document C/S R.012 “COSPAS-SARSAT 406 MHz MEOSAR Implementation Plan”.

4. Radio Frequency Coordination

4.1 The Signatories intend to co-operate to ensure that MEOSAR space segment is designed and developed to successfully process the transmissions of 406-MHz radiobeacons that meet either the requirements of document C/S T.001 “Specification for COSPAS-SARSAT 406 MHz Distress Beacons”, or document C/S T.018, “Specification for Second-Generation Cospas-Sarsat 406-MHz Distress Beacons”, and to ensure that their contributions:

a) do not cause harmful interference to the existing LEOSAR and GEOSAR systems;

b) do not cause harmful interference to other components of the MEOSAR system;

c) do not cause harmful interference to other existing systems operating within or outside the downlink frequency band; and

d) allow interoperability at both the ground station and user levels.

4.2 The Signatories note that the interoperability parameters are given in document C/S R.012 "COSPAS-SARSAT 406 MHz MEOSAR Implementation Plan".

4.3 The Signatories intend to co-operate in accordance with the legal framework of the International Telecommunication Union, including as well as with its recommendations.

5. COSPAS-SARSAT MEOSAR EOC, IOC and FOC Phases

5.1 The Signatories intend to exchange status and implementation-progress information during the MEOSAR EOC, IOC and FOC phases. The Signatories intend to work jointly to update the document C/S R.012 "COSPAS-SARSAT 406 MHz MEOSAR Implementation Plan" to maintain it in the most current state practicable.

5.2 To contribute to the COSPAS-SARSAT MEOSAR EOC, IOC and FOC phases, the Maritime Safety Administration of the People's Republic of China intends through the government of the People's Republic of China:

a) to deploy 406-MHz SAR transponders embarked on the BDS satellites in the EOC and IOC phase, and plan to provide a minimum constellation size of six operational SAR/BDS transponders at the time of entry into the MEOSAR FOC phase;

b) to deploy a SAR/BDS ground segment, consisting of one MEOLUT and related facilities; and

c) to commission the SAR/BDS space and ground segments according to the COSPAS-SARSAT commissioning standards.

5.3 In the context of the COSPAS-SARSAT MEOSAR EOC, IOC and FOC phases, the Co-operating Agencies intend:

a) to co-operate in the commissioning of the SAR/BDS ground segment within the COSPAS-SARSAT System including co-operation in the preparation of necessary Council documents once demonstration has been made of the compliance of the SAR/BDS ground segment with the MEOLUT specifications and commissioning standards; and

b) to co-operate with the Maritime Safety Administration of the People's Republic of China in its objective to declare, when ready, the SAR/BDS service at EOC, IOC and FOC status defined by COSPAS-SARSAT Council, and to recognize commissioned SAR/BDS facilities as an operational contribution to the COSPAS-SARSAT System.

6. Modalities

The Signatories recognize that their co-operation under this Declaration is intended to be implemented within the framework of the existing Programme management structure, defined by

the Council and detailed in document C/S P.011, "COSPAS-SARSAT Programme Management Policy", and consistent with the instruments of association with the Programme deposited by the Ministry of Foreign Affairs of the People's Republic of China on 15 September 1992 and 26 February 1997 (respectively, as a User State and as a Ground Segment Provider) in accordance with document C/S P.002, "Procedure for the Notification of Association with the International Cospas-Sarsat Programme by States Non-Party to the Cospas-Sarsat Agreement".

7. International Fora

The Signatories also intend to co-operate on matters of mutual interest related to satellite-aided search-and-rescue which are considered within the framework of the International Civil Aviation Organization, the International Maritime Organization, the International Telecommunication Union, and other involved (participating / interested / observer-status) organizations.

8. Status

This Declaration is not a binding international arrangement and does not create for the Signatories rights and obligations governed by international law, neither does it supersede in any way the instruments of association of 15 September 1992 and 26 February 1997 mentioned in Section 6 above.

9. Final Provisions

9.1 This Declaration applies on the date thirty (30) days after the last signature for a period of ten (10) years. It is automatically renewed for successive ten-year terms unless a Signatory withdraws or the Signatories collectively determine otherwise.

9.2 This Declaration may be amended by the Signatories by their mutual written consent.

9.3 A Signatory may cease its activities within the scope of this Declaration at any time by a written notice to the other Signatories.

Signed in 6 (six) originals in each of the English, French and Russian languages, each version being equally valid.

For the Maritime Safety Administration of the People's Republic of China

/s/ Li Guoping

For the National SAR Secretariat (NSS), Co-operating Agency of Canada

/s/ Henrik Smith

For the Centre National d'Etudes Spatiales (CNES), Co-operating Agency of the French Republic

/s/ Bruno Chazal

For Federal State Unitary Enterprise Morsviazsputnik, Co-operating Agency of the Russian Federation

/s/ Andrey Kuropyatnikov

For the National Oceanic and Atmospheric Administration (NOAA), Co-operating Agency of the United States of America

/s/ Mark Turner

14 November 2022